MAR 2 7 2012



# GE Healthcare

510(k) Premarket Notification Submission

### 510(k) Summary

In accordance with 21 CFR 807.92 the following summary of information is provided:

Date: October 17, 2011

Submitter: GE Hangwei Medical Systems Co., Ltd.

No.2 Yong Chang North Road,

Beijing Economic & Tech Development Area

Beijing, 100176, P.R.China

Ruogian Liu Primary Contact Person:

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GE Hangwei Medical Systems Co., Ltd.

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Regulatory Affairs Director

GE Healthcare (GE Medical Systems, LLC)

(262) 521-6848 (262) 894-4968

Glen.Sabin@med.ge.com

**Establishment Registration** 

Number: 9613445

Trade Name: Device

GE 1.5T Brivo MR355

Common/Usual Name:

Magnetic Resonance Imaging System

Classification 21 C.F.R. 892.1000 Magnetic Resonance Diagnostic Device

Names:Product Code:

LNH

Predicate Device(s):

K103330, GE 1.5T Brivo MR355/Optima MR360

Device Description:

The modified Brivo MR355 adds (1) one dedicated coil: 4-ch Breast Array Coil; (2) two clinical applications: VIBRANT and 3D FIESTA-C. The coil and clinical applications are standard for predicate Optima MR360 (K103330). All utilize superconducting magnets, gradients, and radio frequency coils and electronics to acquire data in single voxel, two dimensional,

or three dimensional datasets.

The 1.5T Brivo MR355 features a superconducting magnet operating at 1.5 Tesla. The data acquisition system accommodates up to 8 independent receive channels in various increments, and multiple independent coil elements per channel The system uses a during a single acquisition series. combination of time-varying magnetic fields (gradients) and RF transmissions to obtain information regarding the density and



# GE Healthcare

510(k) Premarket Notification Submission position of elements exhibiting magnetic resonance. The system can image in the sagittal, coronal, axial, oblique and double oblique planes, using various pulse sequences and reconstruction algorithms. The 1.5T Brivo MR355 is designed to conform to NEMA DICOM standards (Digital Imaging and Communications in Medicine).

# Intended Use:

The Brivo MR355 is a whole body magnetic resonance scanner designed to support high resolution, high signal-to-noise ratio, and short scan times. It is indicated for use as a diagnostic imaging device to produce axial, sagittal, coronal, and oblique images, spectroscopic images, parametric maps, and/or spectra, dynamic images of the structures and/or functions of the entire body, including, but not limited to, head, neck, TMJ, spine, breast, heart, abdomen, pelvis, joints, prostate, blood vessels, and musculoskeletal regions of the body. Depending on the region of interest being imaged, contrast agents may be used. The images produced by the Brivo MR355 reflect the spatial distribution or molecular environment of nuclei exhibiting magnetic resonance. These images and/or spectra when interpreted by a trained physician yield information that may assist in diagnosis.

#### <u>Technology:</u>

GE 1.5T Brivo MR355 employs the same fundamental scientific technology as its predicate device.

## <u>Determination of</u> <u>Substantial Equivalence:</u>

#### Summary of Non-Clinical Tests:

GE 1.5T Brivo MR355 system is designed for compliance to the medical standards as detailed in the Section 9.1 and 18 of this. premarket submission. The following quality assurance measures were applied to the development of the system:

- Risk Analysis
- Requirements Reviews
- Design Reviews
- Performance Testing (Verification)
- Safety Testing (Verification)
- Internal and External Evaluation (Validation)

#### Summary of Clinical Tests:

The subject of this premarket submission, GE 1.5T Brivo MR355, did not require clinical studies to support substantial equivalence. However, clinical images from validation have been included in Section 20 of this submission.



GE Healthcare 510(k) Premarket Notification Submission

<u>Conclusion:</u> GE Healthcare considers the GE 1.5T Brivo MR355 to be as safe, as effective, and performance is substantially equivalent to the predicate device(s).





Food and Drug Administration 10903 New Hampshire Avenue Document Control Room – WO66-G609 Silver Spring, MD 20993-0002

MAR 2 7 2012

Mr. Ruoquian Liu Regulatory Affairs Manager, MR Modality GE Hangwei Medical Systems Co., Ltd. No. 2 Yong Chang North Road, Beijing Economic & Tech Development Area 100176 BEIJING BEIJING CHINA

Re: K120778

Trade/Device Name: GE 1.5T Brivo MR355 Regulation Number: 21 CFR 892.1000

Regulation Name: Magnetic resonance diagnostic device

Regulatory Class: II Product Code: LNH

Dated: December 29, 2011 Received: March 14, 2012

#### Dear Mr. Liu:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into class II (Special Controls), it may be subject to such additional controls. Existing major regulations affecting your device can be found in Title 21, Code of Federal Regulations (CFR), Parts 800 to 895. In addition, FDA may publish further announcements concerning your device in the <u>Federal Register</u>.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Parts 801 and 809); medical device reporting (reporting of

medical device-related adverse events) (21 CFR 803); and good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820). This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Parts 801 and 809), please contact the Office of *In Vitro* Diagnostic Device Evaluation and Safety at (301) 796-5450. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <a href="http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm">http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm</a> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address http://www.fda.gov/cdrh/industry/support/index.html.

Sincerely Yours

Janine M. Morris

Acting Director

Division of Radiological Devices Office of In Vitro Diagnostic Device

**Evaluation and Safety** 

Center for Devices and Radiological Health

Enclosure



# GE Healthcare 510(k) Premarket Notification Submission

510(k) Number (if known):

Device Name: GE 1.5T Brivo MR355

Indications for Use:

The Brivo MR355 is a whole body magnetic resonance scanner designed to support high resolution, high signal-to-noise ratio, and short scan times. It is indicated for use as a diagnostic imaging device to produce axial, sagittal, coronal, and oblique images, spectroscopic images, parametric maps, and/or spectra, dynamic images of the structures and/or functions of the entire body, including, but not limited to, head, neck, TMJ, spine, breast, heart, abdomen, pelvis, joints, prostate, blood vessels, and musculoskeletal regions of the body. Depending on the region of interest being imaged, contrast agents may be used. The images produced by the Brivo MR355 reflect the spatial distribution or molecular environment of nuclei exhibiting magnetic resonance. These images and/or spectra when interpreted by a trained physician yield information that may assist in diagnosis.

Prescription Use X (Part 21 CFR 801 Subpart D)	AND/OR	Over-The-Counter Use_ (Part 21 CFR 801 Subpart C)
(PLEASE DO NOT WRITE BE IF NEEDED)	LOW THIS LINI	E - CONTINUE ON ANOTHER PAGE
Concurrence of CDRH, Office	of In Vitro Diagno	ostic Devices (OIVD)

Division Sign-Off

Office of In Vitro Diagnostic Device

Evaluation and Safety

510(k) NOV 170

Page 1 of \_\_\_